FE265SS

Diagram No. 1210-4

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Type of Survey Side Scan Sonar

Field No. R/H-20-20-84

Office No. FE-265SS

LOCALITY

State Rhode Island

General Locality Rhode Island Sound

Locality 12 Miles East of Block Island

1984

CHIEF OF PARTY
LCDR R.K.Norris

LIBRARY & ARCHIVES

DATE April 12, 1985

☆U.S. GOV. PRINTING OFFICE: 1980—766-230

FE265SS

Area 1
CHTS:
13218
12300
13003
13006
to sign off see Record of Application

NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

FE-265 SS

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

R/H 20-20-84

State Rhode Island

General locality ~~Southern New England Coast~~ Rhode Island Sound

Locality ~~Northville Corridor, Corridor Points 1-2~~ 12 Miles East of Block Island.

Scale 1:20,000 Date of survey 24 July (206)-07 Aug. (220) 1984

Instructions dated April 12, 1984 Project No. OPR-B660-RU/HE-84

Vessel NOAA Ships RUDE (9040) and HECK (9140)

Chief of party LCDR Robert K. Norris

Surveyed by R.K. Norris, N.G. Millett, E.M. Clark, T.G. Callahan

Soundings taken by echo sounder, ~~hand lead, pole~~ Klein Sonar S/N's 088,249 DSF 6000N S/N's A116N, 3051N Sonargrams/

Graphic record scaled by T.G.C., E.M.C.

Graphic record checked by R.K.N., T.G.C., E.M.C., N.G.M.

Protracted by N/A Automated plot by N/A

Verification by Hydrographic Surveys Branch, Evaluation and Analysis Group, AMC

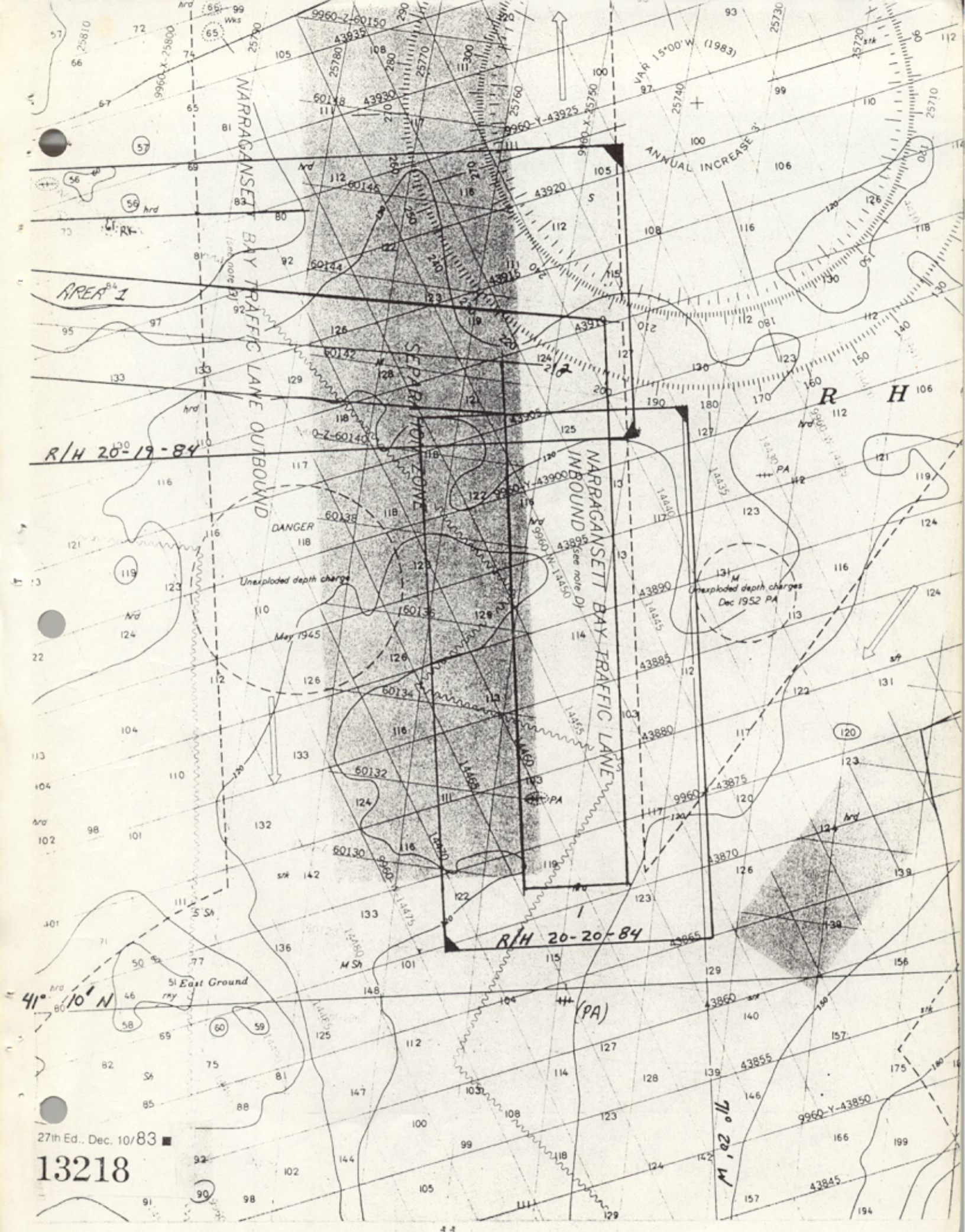
Soundings in fathoms feet at MLW MLLW Predicted Tides

REMARKS: All times are recorded in UTC.

AWOIS and SURF ✓ MWS 6/85

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. G.P.O. 1972-769-565/519 REG.#6



27th Ed., Dec. 10/83 ■

13218

CONTENTS PAGE

* - Removed from the Descriptive Report and filed with the survey records.

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY ~~H~~-FE-265,55 R/H 20-20-84
1:20,000 SCALE, 1984
NOAA SHIPS RUDE & HECK
LCDR ROBERT K. NORRIS, COMDG.

A. Project Authority

This project was conducted in accordance with Hydrographic Project Instructions OPR-B660-RU/HE-84, Southern New England Coast, dated 12 April 1984. One amendment to the project instructions was Change No. 1, dated 21 May, 1984. The purpose of this project, in order of priority, was to provide wire-drag clearance of the Northville Industries Corporation oil tanker route, to provide clearance depths over selected wreck sites and to verify or disprove certain reported submersed wrecks along the south coast of New England.

B. Characteristics and Limits of Area Surveyed

This report contains that area of the one mile wide tanker route from Corridor Point 1 (Lat. 041°-11'-00" N, Long. 071°-21'-35" W) to the junction with R/H 20-19-84 (FE-2694(2)) to the north at Corridor Point 2 (Lat. 041°-16'-11" N, Long. 071°-21'-35" W). The survey work consisted of an initial sonar investigation with 100% coverage of the bottom in the corridor area utilizing 150 meter vessel track spacing and the sonar recorder operated at the 200 meter range scale.

C. Survey Vessels

The side scan sonar work was accomplished by the NOAA Ships Rude (9040) and Heck (9140).

D. Hydrographic Sheets

The hydrographic sheets used in this survey were made of mylar and were constructed with the Digital PDP 11/34 computer S/N AG22645 and Houston Instruments roll-bed plotter S/N 8731-8 aboard the Ship Rude.

The field sheets were plotted at a scale of 1:20,000 and were used aboard each vessel to hand plot the towing vessel's position while on line. A smooth sheet was also plotted aboard the ship using the same equipment as described above. This smooth sheet was used to machine plot the towing vessel's position, to hand plot any targets or large contacts, to delineate the limits of rocky or boulder areas, to hand plot torpedo range buoys and to illustrate the area covered by side scan sonar operations. The field records are being sent to the Atlantic Marine Center for verification and smooth plotting.

E. Equipment and Techniques

All side scan sonar coverage was accomplished with the

Klein systems provided by AMC. These systems consisted of a Model 521 recorder, a 100 KHz towfish, a K-Wing depressor and a towcable. Unit S/N 088 was used aboard the Rude and S/N 249 was used aboard the Heck.

Del Norte rates obtained on fixes were recorded with Eaton Model 7000+ serial printers during this survey. These printers worked fairly well considering the fact that they were not designed to be operated in a marine environment. The printers would often type out a line of meaningless characters or rates from the previous fix before the current fix was recorded. The printer records were annotated such that these meaningless characters and extraneous rates were lined out leaving the correct fix rates clearly displayed.

A Raytheon model DSF 6000N echo sounder was operated and annotated concurrently during all side scan sonar operations. The echo sounder recordings were reviewed daily to ensure that no large objects located directly under the sonar towfish had gone undetected. Unit S/N B051N was used aboard the Rude and unit S/N A116N was used aboard the Heck.

Although it is not anticipated that these soundings records will be used for charting purposes, the settlement and squat data for the Rude and Heck, obtained in Norfolk Harbor on 25 January 1983, is included in this report. No velocity corrections or settlement and squat determinations were actually conducted within or during this project. The draft of the transducers on both vessels is 7.0 feet. — *The hydrography is of reconnaissance value only.*

F. Control Stations

Two electronic control stations were used for this section of the survey. Station 01 was BLOCK ISLAND NORTH LIGHTHOUSE (1874), at latitude 41-13'-39.081" N and longitude 071-34'-34.864" W with an elevation of 17.7 meters. Station 02 was POINT JUDITH LIGHTHOUSE (1839), located at 41-21'-39.323" N and 071-28'-54.826" W with an elevation of 19.8 meters. Both stations were located by NGS and the adjusted positions for these stations were obtained from published NGS horizontal control data. All stations are of Third-Order, Class I control accuracy or better. The station positions are based upon the North American Datum of 1927.

G. Calibration and Position Control

Vessel positioning for all work was accomplished with the Del Norte 520 series electronic positioning equipment operated at a frequency of 9400 MHz in the range-range mode. A listing of DMU and master units used by the vessels during this survey are listed by Julian Day in Appendix A. The remote installed at Station 01 was code 78, serial number 2986. Remote 76, serial number 3004, was installed at Station 02.

Two baseline calibrations were performed during this survey. All baseline calibrations were conducted in the immediate work area and entirely over water in accordance with AMC OPORDER 79. Baseline calibration distances were determined by the HP 3800A electronic distance measuring instrument, serial number

0987A00157. The following is a list of the baseline calibrations, as measured by the HP 3800A:

21 July, 1984	Newport Naval Pier 2 to Gould Island, S.E. Pier	1933.2m
31 August, 1984	Newport Naval Pier 2 to Gould Island, S.E. Pier	1933.2m

Remote codes 78 and 76 were changed to codes 88 and 86, respectively, after the completion of this survey and prior to the final baseline calibration.

Daily calibrations were conducted in the vicinity of the entrance to Narragansett Bay using either three point sextant fixes or circle calibrations about BRENTON REEF LIGHT. The three point sextant fix method was only used when fog, haze and drizzle attenuated the signal from BLOCK ISLAND NORTH LIGHTHOUSE and did not allow this signal to be received at BRENTON REEF LIGHT. These calibration correctors and the circle calibration data was computed using a HP 9815A computer, S/N 1825A02388, and the Hydro Cal Package-800730 and Geodetic Package-800610. No R1 close check was computed on JD 206 for the vessel HECK and no close checks for either rates were computed on JD 209, for both vessels, as a result of severe weather.

The daily correctors for all calibrations that were conducted were stable and within accuracy tolerances for a survey of this scale. Therefore, only the baseline calibration data should be applied to the raw position data during final processing and smooth plotting.

H. Dates of Survey

This survey was begun on 24 July, 1984, (JD 206) and was completed on 7 August, 1984 (JD 220).

I. Reduction and Processing of Data

All side scan data was initially recorded in NOAA Form 77-44, sounding volumes. All header data, position numbers, time, and position control data were recorded in the appropriate columns in the volumes. The remarks column was used to record all line information, vessel rpms, length of towcable (measured from the waterline to the towfish), vessel heading, and any other unusual or noteworthy remarks. The towfish layback was computed by adding the amount of towcable out of the stern plus the stern to antenna distance.

Position data from the side scan sonar work was entered in the Digital PDP 11/34 computer with a modified version of the R/H Double Precision Wire-Drag program. Rates for just one vessel were entered in this program and a single vessel position plot was then generated with the Houston Instruments roll-bed plotter. All side scan sonar work for this survey was plotted in this manner. The 1984 versions of the Rude and Heck wire drag

programs were used to plot all data on this field sheet.

The sonargrams from the side scan sonar work were examined while on line and then again at the end of the day. All notable contacts were flagged during each examination. These flagged contacts were then logged in the Side Scan Sonar Target Abstract for that field sheet. The Target Abstract was then completed and the contacts were plotted on the smooth sheet containing the vessel position plots. The towfish layback was computed by adding the length of towcable out the stern plus the stern to antenna distance (21.3m). However, it should be noted that this layback value is an estimated value used for plotting purposes only. Since a K-Wing depressor was used, the actual layback was somewhat less than the value used, which was computed by adding the antenna to stern distance plus the towcable length. The layback and range to target values from this list were the distances used to plot the contact positions. All values of towcable length on the sonargram and in the sounding volumes refer only to the amount of cable out from the waterline to the towfish. The Side Scan Sonar Target Lists were then compiled from the Target Abstracts and the contact plots. The Del Norte rates of the contact positions were determined using a grid and arc overlay. These rates were then used to determine the latitude and longitude of the contact with the HP 9815A computer and the Geodetic Package program.

J. Junctions and Splits

This side scan sonar survey junctions to the north with contemporary survey FE-2649-WD (1984) R/H 20-19-84. There is adequate overlap with contemporary survey FE-2649-WD R/H 20-19-84. - See the Evaluation Report, section 5.

Side scan sonar coverage was computed and listed on the Side Scan Sonar Coverage Abstract Form, see Appendix L. A well established thermocline was observed in this portion of Rhode Island Sound throughout this survey. This well established thermocline reduced the effective scanning range below the 200m range scale being used over much of the survey area. In order to determine the actual effective scanning range, two seperate sonar coverage abstract computations were conducted. The first abstract was computed assuming no thermocline effect and the theoretical coverage for those areas where no thermocline was observed. The second abstract was then computed for the thermocline influence. Three splits were required in order to completely satisfy the 100% coverage requirement. These splits were conducted on JD 220: fixes 684-688, 689-693, and 694-698. All areas of the corridor between points 1 and 2 received 100% sonar coverage between adjacent search tracks.

The helix was improperly adjusted on recorder 249 (HECK), left channel, resulting in gaps in the records during much of this survey. When the gaps occurred beyond the effects of the thermocline, this effect was not considered to be a problem. However, when the gaps appeared within the effective scanning range, this data was rejected and rerun. Fixes 87-98 were rejected and this area was rerun (Fixes 99-103), as a result of improper helix adjustments. Crocus cloth was applied to the helix blade in accordance with Klein instructions on JD 207, which

resulted in reducing this problem.

K. Comparison with Prior Surveys – *See sections 4.&6. of the Evaluation Report.*

All R/H 20-20-84 (FE-26555(1984)) side scan sonar and sounding records were compared to prior survey H-6444, 1:40,000 scale, dated 1939, which covered a common area. Depths in the survey area range generally from 103 feet to 127 feet on the prior survey. Depths on the present survey compare favorably with the prior survey, although it was noted that present soundings are generally 3 to 4 feet shoaler than the prior records. Present survey soundings were only corrected for vessel draft. – *No sounding plots were generated by the field & no sounding plots were made during verification, therefore*

An area of boulders was noted on the present survey within the corridor from latitudes 041°-11.8′ N to 041°-12.5′ N. Although there is an indication of shoaling in this area on the prior survey, to approximately 103 feet, there is no indication of bottom conditions in this area on the prior survey. – *Concur*

An area of isolated rocks, contacts 1,6,7,17,22, and 24, was noted just south of corridor point 2 from latitudes 041°-15.1′ N to 041°-15.8′ N. There is no indication of this rocky area on the prior survey. – *Concur*

L. Comparison With the Chart

A comparison was made with NOS chart 13218, 27th Ed, Dec 10/83; 1:80,000 scale, which is the largest scale chart of the area. The soundings that appear on this chart within the survey area are from prior survey H-6444. A comparison was made with this prior survey in the previous section of this report.

Regarding non-sounding features, the following charting recommendations are offered:

	Latitude	Longitude
1. Chart "Blds" at	041°-12.2′ N,	071°-21.6′ W
2. Chart "Rky" at	041°-15.5′ N,	071°-21.6′ W

The positions of Narragansett Bay Southern Approach Tracking System Buoys "a"-"h" and Tracking System Lighted Bell Buoy "SE" were checked during the course of this survey and were all found to be on station as charted. Add light characteristic Gk FL to Buoy "a". – *Concur*

As reported in the July 1984 Monthly Activities Report, Tracking System Buoys "i"-"u" should be added to chart 13218, in the following positions: – *Concur*

Buoy	Position Latitude	Position Longitude
i	041°-20′-41" N	071°-23′-36" W
j	041°-20′-26" N	071°-23′-03" W
k	041°-20′-11" N	071°-23′-36" W
l	041°-19′-56" N	071°-23′-03" W
m	041°-19′-41" N	071°-23′-36" W
n	041°-19′-26" N	071°-23′-03" W
o	041°-19′-12" N	071°-23′-36" W
p	041°-18′-57" N	071°-23′-03" W
q	041°-13′-16" N	071°-23′-36" W
r	041°-13′-01" N	071°-23′-03" W

	Latitude	Longitude
s	041°-12'-46" N	071°-23'-36" W
t	041°-12'-32" N	071°-23'-03" W
u	041°-12'-17" N	071°-23'-36" W

Add light characteristics QK FL to buoys o,q,and u.- Concur

A copy of the memorandum from the Naval Underwater Systems Center regarding these buoys is attached in Appendix E.

All presently charted landmarks in the proximity of this survey were visually verified from offshore and are adequate for chartins. AWOIS item 1821, charted wreck PA at Lat 041°-11'-51" N, Long 071°-22'-06" W, is reported to be located within 75 meters of two adjacent search tracklines from this survey. Review of the sonar records from this survey between fixes 67-68 and 75-76 did not reveal any indication of wreckage in this area. It should be noted that numerous boulders exist in this area of the corridor resulting in poor prospects of locating this contact.- See the Evaluation Report sections 4. & 7.

It is recommended that additional sonar work be conducted on this item in the future. It is also recommended that the notation on this wreck be changed to "PD".- See section 7. of the Evaluation Report.

M. Adequacy of Survey

(See the appended Side-Scan Sonar Target Abstract.)

Contacts 18,21,29, and 30 represent significant targets since these objects approach 10 percent of the bottom depth in height. These objects should be further investigated during future hydrographic surveys since they represent significant hydrographic features.- Concur

However, within the context of this survey, using conservative sonar height computations, there is in excess of 90 feet of water over each contact identified above. Therefore, with regard to clearing the tanker route, no further work is required.- Concur

N. Incomplete Items

This survey is considered complete with regard to the clearing of the tanker route for Northville Industries. See the previous two sections of this report for additional survey recommendations for AWOIS item 1821 and hydrographic features located by sonar methods.

O. Currents and Winds

The currents in this section of the corridor had little observable effect on sonar operations. The surface currents on the southern half of this survey appear to be wind driven in nature, influenced only by the predominant wind direction. The currents in the northern half of this survey are more influenced by Narragansett Bay and may be rotary in nature.

P. Personnel

The officers participating in this survey were LCDR Robert K. Norris, LT Neal G. Millett, LT Edward M. Clark, and ENS Thomas G. Callahan.

Q. General Notes

The format of this report is a composite of the Descriptive Report formats contained in the Wire Drag and Hydrographic Manuals. This format is the optimum composite of the pertinent sections of the two reports and is more applicable to the surveys currently being conducted by the Rude and Heck.

Respectfully submitted,

Neal G. Millett, LT., NOAA

R. APPROVAL SHEET

R/H-20-20-84

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personal checks of progress and adequacy. This report and field sheets have been closely reviewed and are considered complete and adequate for charting.

Robert K. Norris

LCDR., NOAA

Commanding Officer

NOAA Ships RUDE & HECK

C. HORIZONTAL CONTROL

No new stations were established for this survey. See Appendix D, Signal List, for a complete listing of all stations used during this survey.

D. SIGNAL LIST

B-660 - RI THE -83/84

WESTBROOK CONG. CHURCH SPIRE (1934)

ID NBR 22
LAT 411710.660
LON 722700.610
FILE 22

WESTBROOK TRAK (1934)

ID NBR 23
LAT 411654.615
LON 722616.481
FILE 23

WATCH HILL LIGHTHOUSE (1873)

ID NBR 24
LAT 411813.646
LON 715132.552
ELEV'N 18.68 M
FILE 24

POINT JUDITH LIGHTHOUSE (1839)

ID NBR 25
LAT 41°21'39.323"
LON 71°28'54.826"
ELEV'N 19.81 M
FILE 25

NORTH DUMPLING LIGHT HOUSE (1874)

ID NBR 26
LAT 411715.932
LON 720111.084
FILE 26

RACE ROCK LIGHT HOUSE (1882)

ID NBR 27
LAT 411436.152
LON 720251.414
FILE 27

BLOCK IS NORTH LIGHTHOUSE (1874)

ID NBR 28
LAT 41°13'39.881"
LON 71°34'34.864"
ELEV'N ~~18.97~~ 17.68 M
FILE 28

POINT JUDITH TANK (1940)

ID NBR 29
LAT 412323.534
LON 712801.461
FILE 29

HAZARD TOWER (1912)

ID NBR 30
LAT 41°24'55.281"
LON 71°27'26.972"
FILE 30

BRENTON REEF LIGHT (1962)

ID NBR 31
LAT 41°25'35.071"
LON 71°23'21.970"
FILE 31

BEAVERTAIL LIGHTHOUSE (1869)

ID NBR 32
LAT 41°26'57.348"
LON 71°23'59.693"
FILE 32

TOWER (1972) (Mt. Prospect)

ID NBR 33
LAT 411520.647
LON 720035.150
ELEV'N 49.00 M
FILE 33

E. REPORT ON AIDS TO NAVIGATION

DEPARTMENT OF THE NAVY
NAVAL UNDERWATER SYSTEMS CENTER

Rec'd 8-1-84

NEWPORT LABORATORY
NEWPORT, RI 02841

NEW LONDON LABORATORY
NEW LONDON, CT 06320

IN REPLY REFER TO

10500/SLMM
Ser 438332-3
25 Jul 84

Copy
info for Lt. Millett

From: Commanding Officer, Naval Underwater Systems Center, Newport, RI 02841
To: Commander, First Coast Guard District, Attn: Chief, Aids to Navigation Branch, 150 Causeway Street, Boston, MA 02114

Subj: REQUEST FOR USE OF COAST GUARD FACILITIES

Ref: (a) Phonecon S.D.O./Alicandro (for Comdr. Group Woods Hole) and J. M. O'Neil (NUSC) on 3 July 1984.

Encl: (1) Narragansett Bay Torpedo Range Maximum Extension EX46698-C
(2) Latitude and Longitude Listing, SLMM dtd 2 June 1981.

1. The Naval Underwater Systems Center is conducting torpedo firing exercises and diving operations on the Navy Torpedo Range located within the traffic separation zone south of Brenton Tower at the entrance to Narragansett Bay. These tests are similar to those conducted on the range during March of 1982 and as of this date are scheduled to commence on or about 20 August 1984 and conclude on or about 31 August 1984.

2. In accordance with reference (a), it is requested that NUSC personnel be permitted access to install and maintain a microwave(9300-9475 MHZ)positioning system, as has been done in previous operations, on Southeast Light on Block Island, Point Judith Light and Beavertail Point Light. In addition, there is a requirement to place a 32' electronics van at the Point Judith Coast Guard Station. This would be located near the lighthouse on the short single lane black-top strip. It is intended to power the van from the utility pole near the lighthouse. NUSC will make arrangements with Narragansett Electric Company to accomplish this.

3. A requirement exists to install three antennas on the lighthouse, which would project above the light on the side away from the sea so as not to interfere with the light's operation. One antenna will be a receiving antenna on 162-174 MHZ, one will be transmit/receive on 149.09 MHZ, and the last will be transmit/receive on 143.7 MHZ. The antenna leads will be kept above ground for safety reasons, between the lighthouse and the van.

4. Due to the length of this operation and the weather conditions on the Range possible during this operation, semi-permanent moorings will be deployed. (See enclosures (1) and (2) for mooring designation and position.) The mooring buoys will be configured the same as the permanent buoys--white with orange strips and orange letters.

10500/SLMM
Ser 438332-3
Jul 84

Subj: REQUEST FOR USE OF COAST GUARD FACILITIES

5. Mr. John M. O'Neil of this Center is the point of contact, and can be reached at (401) 841-3763 or (401) 841-3486.

J. W. AILES, IV

Copy to:
Commander Group Woods Hole
U. S. Coast Guard Base
Woods Hole, MA 02543

CHART 13218

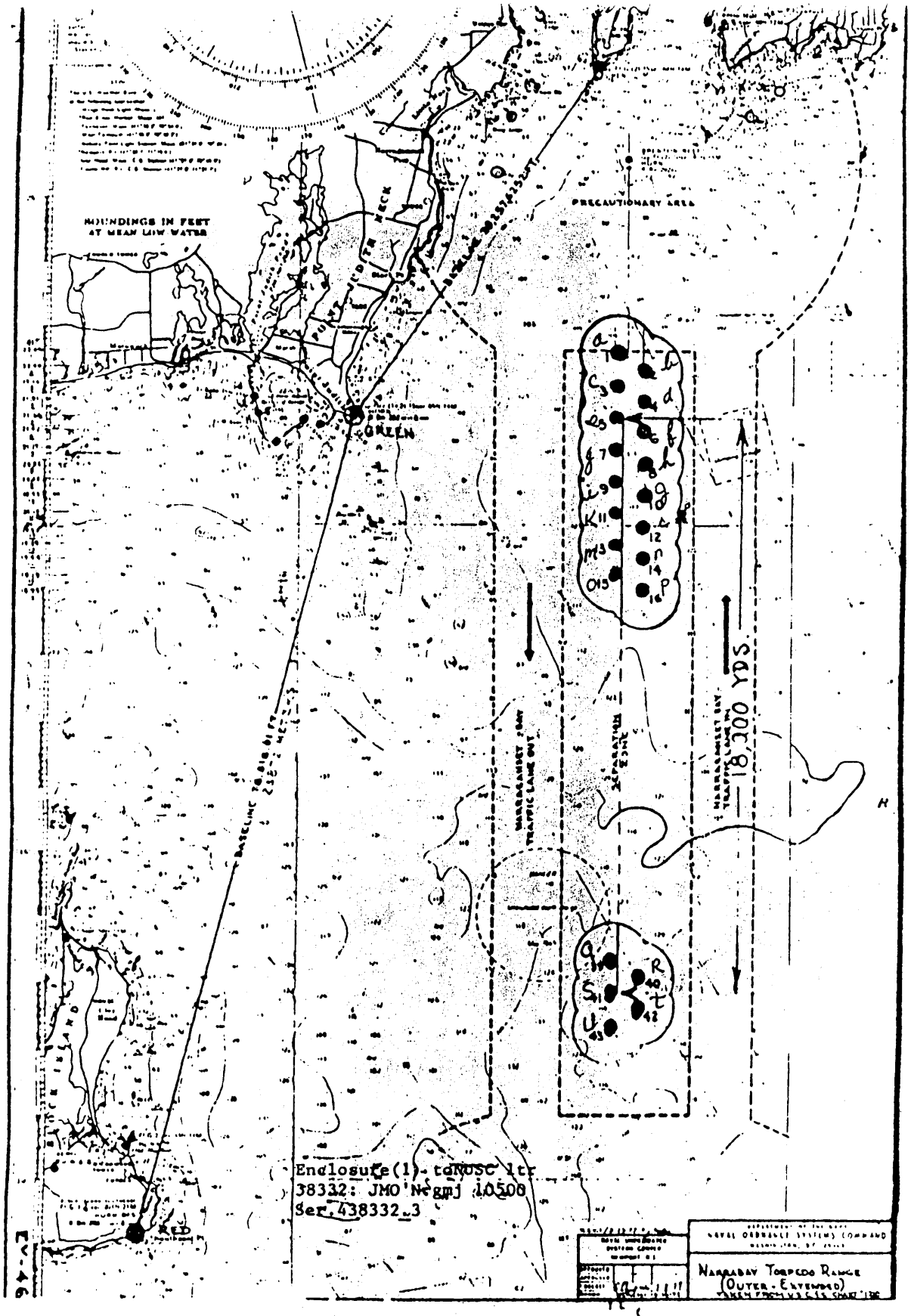
The following information was received from Mr. John O'Neal of NUSC, on 1 August 1984. All Navy maintained buoys are to be permanently moored in the Narragansett Bay traffic separation zone. All buoys are white with orange strips and orange letters and have radar reflectors attached.

Charting Recommendation

1. Retain Buoys A,B,C,D,E,F,G, and H as charted. Add light characteristic Qk FL to Buoy A.

2. Add Buoys I,J,K,L,M,N,O,P,Q,R,S,T, and U to chart 13218 in the positions indicated in NUSC memo.

3. Add light characteristic Qk FL to Buoys O, Q, and U.


SOUNDINGS IN FEET
AT MEAN LOW WATER
PRECAUTIONARY AREA
GREEN
RED
18,200 YDS
NARRAGANSETT BAY
TRAFFIC LANE
SEPARATION ZONE
BASELINE
Enclosure(1) to NUSC ltr
38332: JMO:Negmj 10500
Ser 438332_3
NAVAL ORDNANCE SYSTEMS COMMAND
NARRAGANSETT TORPEDO RANGE
(OUTER - EXTENDED)

OUTER RANGE - SIM#1 7/2/84

Buoy No.	Latitude	Longitude
a 1	41°22'39"	71°23'36"
b 2	41°22'24"	71°23'03"
c 3	41°22' 9"	71°23'36"
d 4	41°21'55"	71°23'03"
e 5	41°21'40"	71°23'36"
f 6	41°21'25"	71°23'03"
g 7	41°21'10"	71°23'36"
h 8	41°20'55"	71°23'03"
i 9	41°20'41"	71°23'36"
j 10	41°20'26"	71°23'03"
k 11	41°20'11"	71°23'36"
l 12	41°19'56"	71°23'03"
m 13	41°19'41"	71°23'36"
n 14	41°19'26"	71°23'03"
o 15	41°19'12"	71°23'36"
p 16	41°18'57"	71°23'03"
17	41°18'42"	71°23'36"
18	41°18'27"	71°23'03"
19	41°18'12"	71°23'36"
20	41°17'58"	71°23'03"
21	41°17'43"	71°23'36"
22	41°17'28"	71°23'03"
23	41°17'13"	71°23'36"
24	41°16'58"	71°23'03"
25	41°16'44"	71°23'36"
26	41°16'29"	71°23'03"
27	41°16'14"	71°23'36"
28	41°15'59"	71°23'03"
29	41°15'46"	71°23'36"
30	41°15'29"	71°23'03"
31	41°15'15"	71°23'36"
32	41°15'00"	71°23'03"
33	41°14'45"	71°23'36"
34	41°14'30"	71°23'03"
35	41°14'15"	71°23'36"
36	41°14'01"	71°23'03"
37	41°13'46"	71°23'36"
38	41°13'31"	71°23'03"
Q 39	41°13'16"	71°23'36"
R 40	41°13'01"	71°23'03"
S 41	41°12'46"	71°23'36"
T 42	41°12'32"	71°23'03"
U 43	41°12'17"	71°23'36"
44	41°12'02"	74°23'03"
45	41°11'47"	71°23'36"
46	41°11'32"	71°23'03"
47	41°11'18"	71°23'36"
48	41°11'03"	71°23'03"
49	41°10'48"	71°23'36"

Buoy Positions 1-16 and 39-43 to be utilized.

Enclosure (2) to NUSC ltr
38332 :JMO'N; gf 10500
Ser 438332-3

F. DIVING REPORT

NEGATIVE REPORT

H. LOCAL NOTICE TO MARINERS REPORT

NEGATIVE REPORT

J. DANGERS TO NAVIGATION REPORT

NEGATIVE REPORT

L. SIDE SCAN SONAR COVERAGE ABSTRACT - TARGET ABSTRACT - TARGET LIST

SIDE SCAN TARGET ABSTRACT

DATE 1984

OPR- B660-RU/HE-84

ITEM # NORTHWICLE CORRIDOR

J.D. _____

R/V 20-20-84

SHIP RUDE / HECK

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW ~~(M)~~ FT	REDUCED DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/~~FT~~)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/~~FT~~)	TOWFISH LAYBACK (M)
1	206	05-06	R1 18020 R2 15625	240	50	112.4	118	24.0	38.0	39.5	42.5	1.7 m 5.6 ft	30.8 m	1.8 m	27.1 m
2	206	17-18	R1 17985 R2 19660	240	50	101.1	108	20.0	41.0	43.0	48.0	2.1 6.9 m	36.9	2.2	
3	206	19-20	R1 18025 R2 20165	240	50	101.4	106	20.0	32.0	33.0	35.5	1.4 4.6'	26.0	1.2	
4	206	30-31	R1 17925 R2 20435	240	50 FT	100.8	106	21.0	28.0	30.5	33.0	1.6 5.2'	20.2	3.4	
5	206	32-33	R1 17865 R2 19890	240	50	91.5	107	21.0	47.0	48.0	59.0	2.3 7.5'	43.1	1.1	
6	206	50-51	R1 17850 R2 14760	240	50	117.1	123	26.0	60.0	61.5	66.0	1.8 5.9'	54.9	1.6	
7	206	99-50	R1 17890 R2 14625	240	50	119.7	123	26.0	50.0	51.0	53.0	1.0 3.3'	43.3	1.2	
8	206	55-56	R1 17640 R2 16330	240	50	115.7	118	24.0	49.0	50.0	51.5	0.7 2.3'	43.1	1.1	
9	206	516-517	R1 19380 R2 21220	240	50	110.0	112	24.0	77.0	79.0	81.0	0.6 2.0'	73.4	2.1	
10	206	519-520	R1 19486 R2 22055	240	50	114.4	118	26.0	33.0	34.0	35.5	1.1 3.6'	21.6	1.5	
11	207	65-66	R1 17735 R2 19775	240	50	103.1	107	21.0	39.0	41.0	43.5	1.2 3.9'	33.6	2.3	
12	207	67-68	R1 17760 R2 20250	240	50	97.4	103	20.5	30.5	33.0	36.0	1.7 5.6'	24.0	3.1	
13	207	75-76	R1 17625 R2 20395	240	50	104.1	109	21.0	51.0	52.0	56.0	1.5 4.9'	47.1	1.1	
14	207	76-77	R1 17586 R2 20150	240	50	98.4	103	20.0	33.0	34.5	37.0	1.4 4.6'	27.2	1.8	
15	207	78-79	R1 17390 R2 19300	240	50	106.4	108	22.0	84.0	85.0	87.0	0.5 1.6'	81.2	1.0	27.1

A-47

SIDE SCAN TARGET ABSTRACT

DATE 1984

OPR- B660-RU/HE-84

R/H 20-20-84

ITEM #

J.D.

SHIP: RUDE/HECK

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M) ~~FT~~	REDUCED DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/~~FT~~)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/~~FT~~)	TOWFISH LAYBACK (M)
16	207	85-86	R1 17375 R2 16480	240	50	115.7	120	25.0	53.5	55.0	58.0	1.3 m 4.3'	48.0 m	1.7 m	27.1 m
17	207	523-524	R1 19270 R2 15500	240	50	115.8	121	28.5	48.0	49.0	52.0	1.6 5.2'	39.8	1.2	
(18)	207	537-538	R1 19236 R2 21585	240	50	103.5	114	26.0	48.0	49.5	56.5	3.2 10.5'	42.2	1.7	
19	207	545-546	R1 18845 R2 20450	240	50	100.8	106	21.5	48.0	49.0	53.0	1.6 5.2'	43.7	1.1	
20	207	553-554	R1 18675 R2 17190	240	50	109.8	115	22.0	64.0	66.0	71.0	1.6 5.2'	60.6	2.1	
(21)	207	572-573	R1 18790 R2 20575	240	50	91.9	105	21.0	47.0	51.0	63.0	4.0 13.1'	43.8	4.3	
22	207	595-596	R1 18725 R2 15100	225	50	115.8	121	26.0	88.0	90.0	96.0	1.6 5.2'	84.6	2.1	
23	209	119-120	R1 17175 R2 16300	240	50	114.8	120	25.0	103.0	104.0	111.0	1.6 5.2'	100.3	1.0	
24	209	607-608	R1 18435 R2 15350	240	50	115.4	121	29.0	63.0	66.0	70.0	1.7 5.6'	56.8	3.3	
25	213	623-624	R1 18505 R2 20320	240	50	98.8	104	22.0	36.0	37.0	40.0	1.6 5.2'	29.7	1.2	
26	214	645-646	R1 18310 R2 19895	240	50	98.7	103	22.0	38.5	39.5	42.0	1.3 4.3'	32.5	1.2	
27	214	656-657	R1 18290 R2 20575	240	50	97.8	105	23.0	37.0	38.0	42.0	2.2 7.2'	30.6	1.2	
28	220	691-692	R1 18800 R2 21200	240	50	109	112	24.0	39.0	40.5	42.0	0.9 3.0'	31.4	1.8	
(29)	220	OFF LINE	R1 18790 R2 20575		50	95.5	105	21.5	37.0	38.0	44.0	2.9 9.5'	32.0	1.2	
(30)	220	692-693	R1 18760 R2 20710	240	50	97.1	105	22.0	30.0	32.0	36.0	2.4 7.9'	22.8	2.6	27.1
31	209	588-589	—	—	N/A	Approx. 107	118	N/A	N/A	N/A	N/A	Approx. 9 feet	—	—	N/A

Wide beam echo seen on the DSF-6000N fathometer but not on the side-scan sonar.

Encircled items recommended for investigation during any future hydrographic survey within the area.

OPR- B660-RU/HE-84

SHEET R/4 20-20-84

SIDE SCAN SONAR TARGET LIST

TARGET NUMBER	CHARTED DEPTH (FT)	REDUCED DEPTH (FT)	HEIGHT OF TARGET (FT)	WIDTH OF TARGET (FT)	Lat. Long. POSITION	FURTHER INVESTIGATION TYPE	DATE	RESULTS	REMARKS
1	118	112.4	5.6	5.9	41° 15' 07.096" N 71° 21' 49.864" W				DEPTH OVER ALL CONTACTS EXCEEDS 90 FT, NO FURTHER INV. REQUIRED.
2	108	101.1	6.9	7.2	41° 12' 29.188" N 71° 21' 48.358" W				
3	106	101.4	4.6	3.9	41° 12' 09.507" N 71° 21' 50.351" W				
4	106	100.8	5.2	11.2	41° 11' 56.504" N 71° 21' 57.504" W				
5	107	99.5	7.5	3.6	41° 12' 17.455" N 71° 21' 55.617" W				
6	123	117.1	5.9	5.2	41° 15' 35.197" N 71° 22' 03.878" W				
7	123	119.7	3.3	3.9	41° 15' 40.687" N 71° 22' 03.639" W				
8	118	115.7	2.3	3.6	41° 14' 31.952" N 71° 22' 00.648" W				
9	112	110.0	2.0	6.9	41° 11' 54.621" N 71° 20' 54.546" W				
10	118	114.4	3.6	4.9	41° 11' 21.195" N 71° 20' 58.689" W				
11	107	103.1	3.9	7.5	41° 12' 19.501" N 71° 22' 00.866" W				
12	103	97.4	5.6	10.2	41° 12' 00.803" N 71° 22' 03.695" W				
13	109	104.1	4.9	3.6	41° 11' 52.335" N 71° 22' 11.626" W				
14	103	98.4	4.6	5.9	41° 12' 01.480" N 71° 22' 11.153" W				
15	108	106.4	1.6	3.3	41° 12' 31.753" N 71° 22' 13.672" W				
16	120	115.7	4.3	5.6	41° 14' 20.521" N 71° 22' 10.823" W				
17	121	115.8	5.2	3.9	41° 15' 43.814" N 71° 21' 03.953" W				

OPR- 0660-RU/HE-84

SHEET R/H 20-20-84

SIDE SCAN SONAR TARGET LIST

TARGET NUMBER	CHARTED DEPTH (FT)	REDUCED DEPTH (FT)	HEIGHT OF TARGET (FT)	WIDTH OF TARGET (FT)	Lat. Long. POSITION	FURTHER INVESTIGATION TYPE	DATE	RESULTS	REMARKS
18	114	103.5	10.5	5.6	41° 11' 35.824" N 71° 21' 05.515" W				DEPTH OVER ALL CONTACTS EXCEEDS 90 FT, NO FURTHER INV. REQUIR
19	106	100.8	5.2	3.6	41° 12' 15.080" N 71° 21' 13.580" W				
20	115	109.8	5.2	6.9	41° 14' 23.096" N 71° 21' 15.098" W				
21	105	91.9	13.1	14.1	41° 12' 08.665" N 71° 21' 17.204" W				
22	121	115.8	5.2	6.9	41° 15' 44.270" N 71° 21' 27.981" W				
23	120	114.8	5.2	3.3	41° 14' 23.003" N 71° 22' 19.683" W				
24	121	115.4	5.6	10.8	41° 15' 27.506" N 71° 21' 36.314" W				
25	104	98.8	5.2	3.9	41° 12' 13.103" N 71° 21' 28.696" W				
26	103	98.7	4.3	3.9	41° 12' 26.414" N 71° 21' 34.756" W				
27	105	97.8	7.2	3.9	41° 11' 58.095" N 71° 21' 41.221" W				
28	112	109	3.0	5.9	41° 11' 42.722" N 71° 21' 22.728" W				
29	105	95.5	9.5	3.9	41° 12' 08.665" N 71° 21' 17.204" W				SAME CONTACT AS 21
30	105	97.1	7.9	8.5	41° 12' 02.169" N 71° 21' 20.293" W				
31	118	107	9	—	41° 13' 54.5" N 71° 21' 24.5" W				Wide beam echo seen on the DSF-6000N fathometer but not on the sidescan sonar.

THEORETICAL COVERAGE - NO THERMOCLINE EFFECT

Sonar Coverage Abstract OPR- B660-Ru/HE-84 Item No. R/H-20-20-84

Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Maximum Track Spacing (m)	Coverage Analysis
107-112,117-122 677-683,123-129	200	26,24 23,20	198	72-86,99-103	200	21	198	165	100%
72-86,99-103	"	21	"	104-106,49-71	"	20	"	215	"
104-106,49-71	"	20	"	26-48	"	21	"	225	"
26-48	"	21	"	2-25	"	20	"	225	"
2-25	"	20	"	653-671	"	23	"	255	"
653-671	"	23	"	631-652	"	22	"	265	"
631-652	"	22	"	605-628	"	21	"	175	"
605-628	"	21	"	578-596	"	23	"	200	"
578-596	"	23	"	559-577	"	22	"	245	"
559-577	"	22	"	541-558	"	22	"	245	"
541-558	"	22	"	522-540	"	21	"	180	"
522-540	"	21	"	597-604,500-521 672-676	"	22,21 24	"	250	"

Sonar Coverage Abstract

OPR-B-660-RU/HE-84 Item No. R/H-20-20-84

Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Maximum Track Spacing (m)	Coverage Analysis
107-112,117-122 677-683,123-129	200	20	102-108	72-86,99-103	200	21	66-105	165	100% Fix 86 covers 99
72-86,99-103	200	21	105 to 66	104-106,49-71	200	20	120 to 99	215	100% with split 684-688
104-106,49-71	200	20	105 to 104	26-48	200	21	135 to 60	225	100% with split 694-698
26-48	200	21	135 to 60	2-25	200	20	135 to 120	225	100% *
2-25	200	20	135 to 120	653-671	200	23	135	255	100% *
653-671	200	23	135	631-652	200	22	135	265	100% *
631-652	200	22	135	605-628	200	21	135 to 120	175	100% *
605-628	200	21	135 to 120	578-596	200	23	105	200	100% *
578-596	200	23	105	559-577	200	22	105 to 75	245	100% with split 689-693
559-577	200	22	120 to 75	541-558	200	22	135 to 114	245 to 185	100% *
541-558	200	22	120 to 114	522-540	200	21	120 to 45	180	100% *
522-540	200	21	120 to 45	597-604,500-521 672-676	200	21	105	250	100% *

* Actual track spacing less than min. effective scanning range in those areas influenced by the thermocline.

NOAA FORM 76-155
(11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-265

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
BLOCK ISLAND (title)										1
RHODE ISLAND (title)										2
RHODE ISLAND SOUND (title)										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
				Approved:						18
				Chas. E. Hamilton						19
				Chief Geographer — N/CG2x5						20
										21
				4 FEB 1985						22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 61-29
(12-71)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REFERENCE NO.
MOA23-44-85

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check):

☐ ORDINARY MAIL ☐ AIR MAIL
☒ REGISTERED MAIL ☐ EXPRESS
☐ GBL (Give number) _____

TO:

CHIEF, DATA CONTROL SECTION
HYDROGRAPHIC SURVEYS BRANCH, N/CG243
NATIONAL OCEAN SERVICE, NOAA
ROCKVILLE, MD 20852

DATE FORWARDED
April 10, 1985

NUMBER OF PACKAGES
Two (2)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-26555 R/H-20-20-84 OPR-B660-RU/HE-84

Rhode Island, Rhode Island Sound, 12 Miles East of Block Island

Package # 1 of 2 (Tube).

✓1 – Original Descriptive Report
✓1 – Final Field Sheet
✓2 – Preliminary Field Sheets

Package # 2 of 2. (Box)

✓1 – Accordian Folder containing Echograms and Field Data Printouts
✓2 – Sounding Volumes
✓1 – Envelope containing Side-Scan Sonargrams
✓1 – Envelope containing Horizontal Control Data
✓1 – Envelope containing Data removed from the Descriptive Report

FROM: (Signature) Maurice B. Hickson, Jr.
for LCDR. David B. MacFarland, Jr.

RECEIVED THE ABOVE
(Name, Division, Date)
Dwayne S. Clark
April 12, 1985
N/CG243

Return receipted copy to:

ATLANTIC MARINE CENTER
HYDROGRAPHIC SURVEYS BRANCH (N/MOA23)
439 W. YORK STREET
NORFOLK, VIRGINIA 23510

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: FE-265 SS

Number of positions	330
Number of soundings	N/A
Number of control stations	5

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination		
Verification of Field Data		
Quality Control Checks		
Evaluation and Analysis	43	Apr. 5, 1985
Final Inspection	2	Apr. 3, 1985
TOTAL TIME	45	

Marine Center Approval — Apr. 5, 1985

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: FE-265 SS FIELD NO.: R/H-20-20-84

Rhode Island, Rhode Island Sound, 12 Miles East of Block Island

SURVEYED: July 24 through August 7, 1984

SCALE: 1:20,000 PROJECT NO: OPR-B660-RU/HE-84

SOUNDINGS: DSF-6000N Fathometer
Klein Side-Scan

CONTROL: Del Norte 520
(Range/Range)

Chief of Party.....R. K. Norris

Surveyed by.....N. G. Millett
.....E. M. Clark
.....T. G. Callahan

1. INTRODUCTION

a. This is entirely a side-scan sonar survey. A Raytheon DSF-6000N fathometer was operated concurrently with the side-scan sonar but the soundings are of reconnaissance value only as necessary sounding correctors were not determined. No hydrography beyond reconnaissance hydrography was required. No wire drag was accomplished during this survey.

b. A conventional smooth plot was not generated during processing. The final field sheet adequately displays the lines run and the contacts found. A chart section depicting the area insonified, the boulder field found and the area described as rocky by the hydrographer is attached to this report.

c. Corrections and notes made by the evaluator to the Descriptive Report are denoted in red ink.

2. CONTROL AND SHORELINE

a. The source of control is adequately discussed in section F. and Appendix D. of the Descriptive Report.

b. There is no shoreline within the limits of this survey.

3. HYDROGRAPHY

The hydrography collected on this survey is of reconnaissance value only.

4. CONDITION OF SURVEY

The final field sheet, survey records, and reports are adequate and conform to the requirements of the Hydrographic Manual with the following exceptions:

a. In general the Descriptive Report is excellent in its entirety.

b. Prior surveys common to the survey area which were identified in the Project Instructions were used for comparisons by the hydrographer. The Project Instructions were deficient in that they did not list or require comparisons with prior survey H-4005 WD (1917-19).

c. No mention or reference was made by the hydrographer in the Descriptive Report pertaining to the recovery of geodetic control stations as required by section 3.2.1. of the Project Instructions.

d. AWOIS Item 01821 (F/V BARBARA G) charted in Latitude 41°11'51", Longitude 71°22'06" (PA) was not investigated as specified by the Survey Requirements section in the listing for this item.

e. Only the more prominate features in rock/boulder fields were specified as contacts. To have designated all contacts within these fields would serve no useful purpose. The hydrographer adequately noted the more prominate and representative features and additionally defined the limits of the fields.

f. No least depths on contacts were determined by conventional methods as required by section 7.12.3.1. of the Project Instructions because the hydrographer determined that no critical features existed.

g. No Loran-C chart verification data was submitted with the survey records.

h. No section "Reference to Reports" was included in the Descriptive Report, therefore it cannot be determined if the hydrographer complied with the Coast Pilot section (8.5) of the Project Instructions. Review of the 19th Edition (January 1984) of the Coast Pilot 2 during Evaluation indicates there is nothing revealed by the present survey which would affect the Coast Pilot.

i. Smooth tides were not requested nor required for processing this side-scan sonar survey.

5. JUNCTIONS

Survey FE-269WD (1984), R/H-20-19-84 joins the present survey to the north. This junction will be addressed in the Evaluation Report of FE-269WD(1984). No contemporary surveys exist to the east, west, or south of the present survey.

6. COMPARISON WITH PRIOR SURVEYS

a. Hydrographic Survey H-6444 (1939) 1:40,000

This prior survey is common to the entire present survey. Meaningful comparisons between prior hydrography and the present survey

cannot be made since this is entirely a side-scan sonar survey. Adequate comparisons between the reconnaissance hydrography and prior soundings have been made by the hydrographer in section K. of the Descriptive Report.

b. Wire Drag Survey H-4005 WD (1917-19) 1:50,000

This prior survey is common to approximately 99% of the present survey. No conflicts exist between prior effective depths within the common area. Clearance depths within the common area range from 85 to 100 feet. All contacts found by the present survey have computed least depths greater than the prior clearance depths.

7. COMPARISON WITH CHART 13218 (27th Edition, Dec. 10, 1983)

a. Hydrography

The charted hydrography originates with the previously discussed prior survey. The previously discussed prior survey requires no further consideration. The hydrographer makes adequate chart comparisons in section L. of the Descriptive Report, however in regard to AWOIS item 1821, insufficient work was accomplished. However, since this wreck lies in a boulder field of some significant size boulders and the wreck is a 34-foot fishing vessel with an 11-foot beam, it is doubtful that this wreck could be detected by side-scan sonar and considering the depths in the area it is highly improbable that it could extend up to the 70-foot required clearance depths and is therefore considered non-dangerous. It is recommended that this wreck be retained as charted with the "PD" notation but as a non-dangerous wreck.

b. Aids to Navigation

Aids to navigation common to the surveyed area are adequately discussed in section L. of the Descriptive Report.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted in this report.

9. ADDITIONAL FIELD WORK

This is a good side-scan sonar survey which serves its intended purpose. Additional field work is adequately addressed by the hydrographer in sections L.,M., and N. of the Descriptive Report.

Maurice B. Hickson III
Cartographer
Evaluation and Analysis

INSPECTION REPORT
FE-265 SS

The data that make up this Side Scan Sonar survey have been inspected to gain insight into its overall completeness regarding survey coverage, presentation of survey results, and the verification or disproval of charted data. This survey, except as noted in the Evaluation Report, is considered complete and adequate to meet National Ocean Service standards. Processing is considered complete. The survey records comply with NOS requirements except as noted in the Evaluation Report.

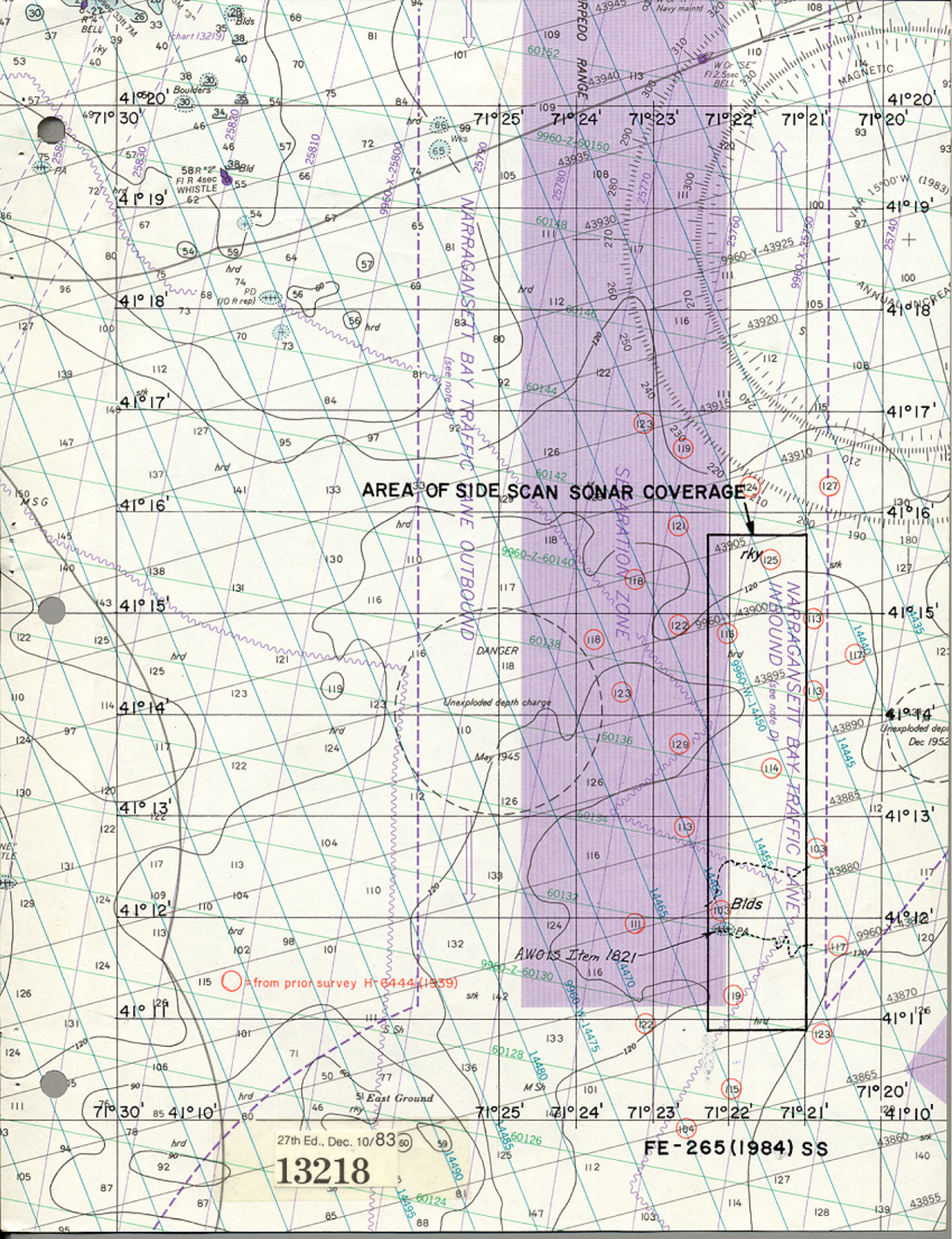
Inspection

R. D. Sanocki
Chief, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch

David B. MacFarland, Jr., LCDR, NOAA
Chief, Hydrographic Surveys Branch

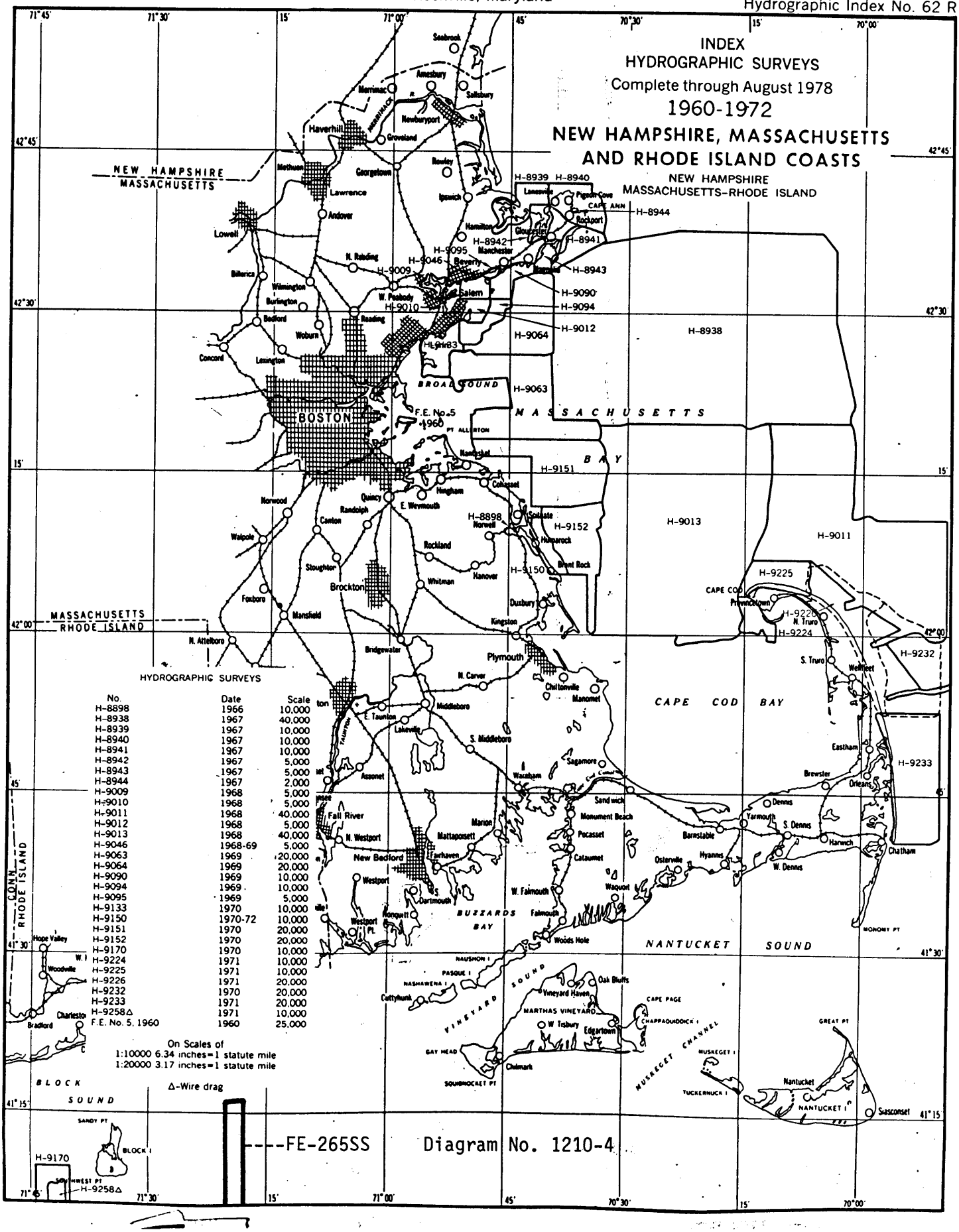
Approved April 5, 1985

Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center


AREA OF SIDE SCAN SONAR COVERAGE
NARRAGANSETT BAY TRAFFIC LANE OUTBOUND
SEPARATION ZONE
NARRAGANSETT BAY TRAFFIC LANE INBOUND
TORPEDO RANGE
DANGER
Unexploded depth charge
May 1945
Unexploded depth charge
Dec 1952
AWOIS Item 1821
Blds
East Ground
MAGNETIC
ANNUAL INCREASE
VAR 15°00'W (1983)
= from prior survey H-6444 (1939)
27th Ed., Dec. 10/83
13218
FE-265 (1984) SS

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 62 R



NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-265SS

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
13218	5-8-86	B Loretz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #66 Fully Applied
12300	5-8-86	B. Loretz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #54 Fully Applied
13006	5-8-86	B. Loretz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #47 Fully Applied
13003	5-8-86	B. Loretz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #60 Fully Applied
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			STANDARDS CK'D 4-17-85 C. Loy

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED